In [1]:
```python
import numpy as np
import math as m
```

In [2]:
```python
def Chinese_Remainder(a_1,a_2,n_1,n_2):
    y_1,y_2 = extended(n_1,n_2)[1:]
    return (a_1*y_2*n_2+a_2*y_1*n_1)%(n_1*n_2)
```

In [3]:
```python
def extended(a, b):
    x_0,y_0, x_1,y_1 = 0,1, 1,0
    while a != 0:
        q, r = b//a, b%a
        m, n = x_0-x_1*q, y_0-y_1*q
        b,a, x_0,y_0, x_1,y_1 = a,r, x_1,y_1, m,n
    gcd = b
    return gcd, x_0, y_0
```

In [4]:
```python
m.gcd(5123389,8168835)
```

Out[4]: 1

In [5]:
```python
Chinese_Remainder(2226599,8023037,5123389,8168835)
```

Out[5]: 26663845164692

In [8]:
```python
5123389*8168835
```

Out[8]: 41852119381815

In [9]:
```python
Chinese_Remainder(155,2479,277,3463)
```

Out[9]: 213722

In [10]:
```python
Chinese_Remainder(213722,3419,277*3463,4051)
```

Out[10]: 1222299496

In [11]:
```python
Chinese_Remainder(1222299496,5758,277*3463*4051,6317)
```

Out[11]: 7543804279237

In [12]:
```python
277*3463*4051*6317
```

Out[12]: 24547393284917

In [ ]: